

REMARKS/ARGUMENTS

Claims 1 and 3-10, 21, 22 and 24-28 are pending in this application. By this Amendment, Applicants AMEND claims 1, 21, 24 and 25, and cancel claim 23.

Claims 1, 3-10 and 21-26 were rejected under 35 U.S.C. § 112, second paragraph as allegedly being indefinite. Applicants have amended the claims so as to remove the recitations of "about" and "substantially". Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection of claims 1 and 3-10 and 21-26 under 35 U.S.C. § 112, second paragraph.

Claims 1, 3, 4, 7, and 8 were rejected under 35 U.S.C. §102(b) as being anticipated by Duggan et al. (U.S. 3,793,604). Claims 1, 3, 4, 7-10, and 21-26 were rejected under U.S.C. § 102(b) as being anticipated by Camp (U.S. 5,726,623), or in the alternative, under 35 U.S.C. U.S.C. § 103(a) as being obvious over Camp in view of Ikeda et al. (U.S. 6,147,330), Duggan et al., or Frielinghaus (U.S. 5,168,257). Claims 1, 3, 4, 7-10, and 21-26 were rejected under U.S.C. § 103(a) as being unpatentable over Rehnelt (U.S. 6,232,868) in view of Camp. Claims 5 and 27 were rejected under U.S.C. §103(a) as being unpatentable over Camp (with or without the noted alternative art) or Rehnelt with Camp, and further in view of Nagao et al. (U.S. 5,939,972). Claims 6 and 28 were rejected under U.S.C. §103(a) as being unpatentable over Camp, or Rehnelt with Camp, further in view of Ikeda et al. Applicants respectfully traverse the rejections of claims 1 and 3-10, 21, 22 and 24-29.

Claim 1 has been amended to recite:

"A surface-mountable PTC thermistor element comprising:  
a thermistor element body including a top surface and a bottom surface;  
electrodes disposed on the top surface and the bottom surface of the thermistor element body; ;  
lower and upper terminals arranged such that each of the electrodes is connected with a respective one of the lower and upper terminals, and each of the lower and upper terminals is extended downward; wherein ;  
said lower terminal includes a junction portion, **a short vertical-leg**

**portion bent vertically in a downward direction at an angle of 90° relative to the surface of said thermistor element body such that the short vertical-leg portion extends perpendicular to the surface of the thermistor element body, and a lower-end portion which extends parallel to the junction portion and perpendicular to the short vertical-leg portion;**

said short vertical-leg portion is directly connected and extends directly between the junction portion and the lower-end portion;

the junction portion of the lower terminal is mechanically attached to one of the electrodes;

the upper and lower terminals contact only the electrodes on the top and bottom surfaces of the thermistor element body and a mounting surface when the surface-mountable PTC thermistor element is mounted on the mounting surface; and

**said vertical-leg portion of the lower terminal is located closer to the center of the thermistor element body than to a periphery of the thermistor body so as to be spaced inwardly from the periphery of the thermistor element body.”** (emphasis added)

Claim 21 recites features that are similar to the features recited claim 1, including the above-emphasized features.

The Examiner alleged that Duggan et al. teaches all of the features recited in Applicants' claim 1, that Camp, or alternatively Camp in view of Ikeda et al., Duggan et al. or Frielinghaus, teaches all of the features recited in Applicants' claim 1 and 21, and that Rehnelt in view of Camp teaches all of the features recited in Applicants' claims 1 and 21. Applicants respectfully disagree.

Claim 1 has been amended to recite the features of “a short vertical-leg portion bent vertically in a downward direction at an **angle of 90°** relative to the surface of said thermistor element body such that the short vertical-leg portion extends **perpendicular to the surface of the thermistor element body**, and a lower-end portion which extends parallel to the junction portion and perpendicular to the short vertical-leg portion” and “said vertical-leg portion of the lower terminal is located **closer to the center of the thermistor element body than to a periphery of the thermistor body** so as to be spaced inwardly from the periphery of the thermistor element body”

(emphasis added). Claim 21 has been similarly amended.

In contrast to Applicants' claims 1 and 21, the figure of Duggan et al. clearly shows that the lead wires 3 include a segment 4 that is connected to thermistor 1 and an **acute angle bend** 5. By definition, an acute angle is **less than 90°**. Thus, Duggan et al. certainly fails to teach or suggest the feature of "a short vertical-leg portion bent vertically in a downward direction at an **angle of 90°** relative to the surface of said thermistor element body such that the short vertical-leg portion extends **perpendicular to the surface of the thermistor element body**, and a lower-end portion which extends parallel to the junction portion and perpendicular to the short vertical-leg portion" (emphasis added) as recited in Applicants' claim 1, and similarly in Applicants' claim 21.

Camp teaches a lower terminal 14 including a short vertical-leg portion, as seen in Figs. 2 and 5 of Camp, that is disposed **much** closer to the periphery of the thermistor body 10 than to the center of the thermistor body 10, and in fact, is disposed so as to be tangential to the periphery of the thermistor body, as clearly seen in Fig. 5 of Camp. Thus, Camp certainly fails to teach or suggest the feature of "said vertical-leg portion of the lower terminal is **located closer to the center of the thermistor element body than to a periphery of the thermistor body** so as to be spaced inwardly from the periphery of the thermistor element body" (emphasis added) as recited in Applicants' claims 1 and 21.

Ikeda et al., Duggan et al. and Frielinghaus were relied upon to allegedly teach terminals that are spaced inwardly from the periphery of the thermistor element body. However, none of Ikeda et al., Duggan et al. and Frielinghaus teaches or suggest the feature of "said vertical-leg portion of the lower terminal is located **closer to the center of the thermistor element body than to a periphery of the thermistor body** so as to be spaced inwardly from the periphery of the thermistor element body" (emphasis added) as recited in Applicants' claims 1 and 21.

As noted above, Camp clearly fails to teach or suggest the feature of "said

vertical-leg portion of the lower terminal is located closer to the center of the thermistor element body than to a periphery of the thermistor body so as to be spaced inwardly from the periphery of the thermistor element body” as recited in Applicants’ claims 1 and 21.

Similarly, as seen in Fig. 2, Rehneft teaches a lower terminal 5 having a short vertical-leg portion which is disposed at the periphery of the thermistor body 4, and certainly fails to teach or suggest the feature of “said vertical-leg portion of the lower terminal is **located closer to the center of the thermistor element body than to a periphery of the thermistor body** so as to be spaced inwardly from the periphery of the thermistor element body” (emphasis added) as recited in Applicants’ claims 1 and 21.

Accordingly, Applicants respectfully submit that none of the prior art of record, applied alone or in combination, teaches or suggests the unique combination and arrangement of elements recited in Applicants’ claims 1 and 21.

In view of the foregoing amendments and remarks, Applicants respectfully submit that claims 1 and 21 are allowable. Claims 3-10, 22 and 24-29 depend upon claims 1 and 21, and are therefore allowable for at least the reasons that claims 1 and 21 are allowable.

To the extent necessary, Applicants January 23, 2005, the period for response to the Office Action dated August 23, 2004.

In view of the foregoing amendments and remarks, Applicants respectfully submit that this application is in condition for allowance. Favorable consideration and prompt allowance are solicited.

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The Commissioner is authorized to charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 50-1353.

Respectfully submitted,

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